



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,191	10/31/2001	Roland M. Hochmuth	10017760-1	5760

7590 01/24/2006  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

TUNG, KEE M

ART UNIT	PAPER NUMBER
----------	--------------

2671

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/004,191	<b>Applicant(s)</b> HOCHMUTH ET AL.	
	<b>Examiner</b> Kee M. Tung	<b>Art Unit</b> 2671	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 37-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. In view of the new arguments presented in the Appeal Brief filed on 11/21/05, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 37-39, 43-45 and 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al (The interactive performance of SLIM: a stateless, thin-

client architecture, hereinafter "Schmidt") in view of Sun Ray Appliances: The Network is the Computer (hereinafter after "Sun").

Schmidt teaches a system for displaying image (page 33, Fig. 1), comprising a display device (such as, the display within the consoles which is based on Sun Ray I Appliance architecture or SLIM) communicatively couplable to a network (interconnection fabric) and adapted to display the image, the SLIM comprising: a display network interface (page 34, section 2.1, Based-T Ethernet connection and page 35, section 2.3, 2<sup>nd</sup> paragraph, network interface) operable to receive graphics image data of the image from the network (page 35, section 2.3, 1<sup>st</sup> paragraph); a display frame buffer (page 35, section 2.2, 1<sup>st</sup> paragraph, local frame buffer) operable to store the received graphics image data; and a display refresh unit (page 35, section 2.2, 1<sup>st</sup> paragraph, refreshing the display from local frame buffer) operable to read the graphics image data from the display frame buffer and display the image. However, Schmidt fails to explicitly teach the SLIM is integrated into the display device. Sun teaches the latest Sun Ray 100 and 150 Applicances integrated the SLIM into the display device. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of integration SLIM and the display device of latest product line of Sun Ray 100 and 150 into the early product of Sun Ray I in order to reduce the desktop system footprint while simplifying cabling and setup. Therefore, at least claim 37 would have been obvious by Schmidt and Sun.

As per claim 38, Schmidt teaches a display network interface port (inherently by the teachings of interconnection fabric of Fig. 1 in order to receive data over the network).

As per claim 39, Schmidt teaches the display network interface port is selected from the group consisting of an Ethernet port, an infiniband port, and a wireless network transceiver (page 34, section 2.1, Based-T Ethernet connection).

As per claim 43, Schmidt teaches the display device is adapted to display the image via at least one of an element selected from the group consisting of a CRT, LCD, TFT, LED and an organic polymer (is inherent to replace the display device of Fig. 1 to any one of the display device on the listed without required any skill).

As per claim 44, Schmidt teaches the display network interface of the display device adapted to receive the graphics image data from a remote source device via a plurality of packets (Page 35, section 2.2, UDP/IP transmission between servers and consoles).

Method claims 45, 50 and 51 are similar in scope to system claims 37, 43 and 44, and thus are rejected under similar rationale.

System claim 52 is similar in scope to system claim 37, and thus is rejected under similar rationale.

4. Claims 40-42, 46, 47, 49, 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al (The interactive performance of SLIM: a stateless, thin-client architecture, hereinafter "Schmidt") in view of Sun Ray Appliances:

The Network is the Computer (hereinafter after "Sun") as applied to claims 37, 45 and 52 above, and further in view of Belt (5,974,471).

The teachings of Schmidt and Sun are given in previous paragraph of this office action. However, the combination of Schmidt and Sun fails to explicitly teach or suggest the display device further comprises a display decompression unit. This is what Belt teaches. Belt teaches a computer system having distributed compression and decompression logic (codec 172) for compressed data movement (title and Fig. 1). The codec (172) in the device preferably compresses the data before transferring the data onto the bus. The receiving or destination device includes codec logic which receives the compressed data and decompresses the data before used or stored by the device (abstract). It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of codec of Belt into the system of Schmidt and Sun in order to provide increased efficiency and reduced bus bandwidth requirements as taught by Belt (abstract). Therefore, at least claims 40-42, 46, 47, 49, 53 and 54 would have been obvious.

5. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidt et al (The interactive performance of SLIM: a stateless, thin-client architecture, hereinafter "Schmidt"), Sun Ray Appliances: The Network is the Computer (hereinafter after "Sun") and Belt (5,974,471) as applied to claims 45 and 46 above, and further in view of Torborg, Jr. et al (5,936,616 hereinafter "Torborg").

The teachings of combined system of Schmidt, Sun and Belt are given in previous paragraph of this Office action. However, the combined system fails to explicitly teach or suggest the compressed and decompressed graphics image data stored in different portions of the display frame buffer. This is what Torborg teaches. Torborg teaches a display controller that maintains a shared memory 142 comprising both a decompressed cache (VFB cache) used to store a decompressed portion of the frame buffer, and compressed memory used to store compressed subregions of the frame buffer (Fig. 6, col. 9, lines 39-43). The invention provides the advantages of reducing memory requirements in computer display architectures because the display image is stored in compressed form, and reducing the memory bandwidth requirement access the display image since it requires less bandwidth to transfer compressed data as opposed to decompressed data as taught by Torborg (col. 3, lines 14-22). It would have been obvious to one of ordinary skill in the art at the time the present invention was made to have implement the console frame buffer as comprising both compressed portion and decompressed portion as taught by Torborg in order to conserve storage and reduce memory bandwidth. Therefore, at least claim 48 would have been obvious.

### ***Response to Arguments***


6. Applicant's arguments with respect to claims 37-54 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kee M. Tung whose telephone number is 571-272-7794. The examiner can normally be reached on Tuesday - Friday from 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kee M Tung  
Primary Examiner  
Art Unit 2671

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:



ULKA CHAUHAN  
SUPERVISORY PATENT EXAMINER